NOTICE OF ALLOWANCE AND FEE(S) DUE

| 25920 | 7590 | 12/09/2010 |

MARTINE PENILLA & GENCARELLA, LLP
710 LAKEWAY DRIVE
SUITE 200
SUNNYVALE, CA 94085

EXAMINER
VO, QUANG N

ART UNIT	PAPER NUMBER
2625	

DATE MAILED: 12/09/2010

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/811,078	03/26/2004	Toshiaki Kakutani	MIPFP083	8066

TITLE OF INVENTION: TECHNIQUE FOR IMAGE DATA RECORDING

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	$1510	$300	$0	$1810	03/09/2011

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

HOW TO REPLY TO THIS NOTICE:

I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

A. If the status is the same, pay the TOTAL FEE(S) DUE shown above.

B. If the status above is to be removed, check box 5b on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above, or

If the SMALL ENTITY is shown as NO:

A. Pay TOTAL FEE(S) DUE shown above, or

B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check box 5a on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and 1/2 the ISSUE FEE shown above.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

PTOL-85 (Rev. 08/07) Approved for use through 08/31/2010.

Complete and send this form, together with applicable fee(s), to: <u>Mail</u>

Mail Stop ISSUE FEE
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450
or <u>Fax</u> **(571)-273-2885**

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

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Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

Certificate of Mailing or Transmission
I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

_____ (Depositor's name)

_____ (Signature)

_____ (Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/811,078	03/26/2004	Toshiaki Kakutani	MIPFP083	8066

TITLE OF INVENTION: TECHNIQUE FOR IMAGE DATA RECORDING

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	$1510	$300	$0	$1810	03/09/2011

EXAMINER	ART UNIT	CLASS-SUBCLASS
VO, QUANG N	2625	358-003120

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

❑ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.

❑ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list

(1) the names of up to 3 registered patent attorneys or agents OR, alternatively,

(2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.

1 _____

2 _____

3 _____

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE   (B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent) : ❑ Individual ❑ Corporation or other private group entity ❑ Government

4a. The following fee(s) are submitted:

❑ Issue Fee
❑ Publication Fee (No small entity discount permitted)
❑ Advance Order - # of Copies _____

4b. Payment of Fee(s): (**Please first reapply any previously paid issue fee shown above**)

❑ A check is enclosed.
❑ Payment by credit card. Form PTO-2038 is attached.
❑ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment, to Deposit Account Number _____ (enclose an extra copy of this form).

5. **Change in Entity Status** (from status indicated above)

❑ a. Applicant claims SMALL ENTITY status. See 37 CFR 1.27.   ❑ b. Applicant is no longer claiming SMALL ENTITY status. See 37 CFR 1.27(g)(2).

NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

Authorized Signature _____   Date _____

Typed or printed name _____   Registration No. _____

UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/811,078	03/26/2004	Toshiaki Kakutani	MIPFP083	8066

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Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)
(application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 440 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 440 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (http://pair.uspto.gov).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

PTOL-85 (Rev. 08/07) Approved for use through 08/31/2010.

	Application No.	Applicant(s)
Notice of Allowability	10/811,078	KAKUTANI, TOSHIAKI
	Examiner	Art Unit
	Quang N. Vo	2625

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *9/30/2010*.

2. ☒ The allowed claim(s) is/are *2-8, 17, 20, 23, 26-28* .

3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☒ All   b) ☐ Some*   c) ☐ None   of the:

        1. ☒ Certified copies of the priority documents have been received.

        2. ☐ Certified copies of the priority documents have been received in Application No. _____ .

        3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the

            International Bureau (PCT Rule 17.2(a)).

    * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application. **THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.

    (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached

        1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.

    (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of

        Paper No./Mail Date _____.

    Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)

2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)

3. ☐ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____

4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material

5. ☐ Notice of Informal Patent Application

6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____ .

7. ☒ Examiner's Amendment/Comment

8. ☒ Examiner's Statement of Reasons for Allowance

9. ☐ Other _____.

/Quang N Vo/
Examiner, Art Unit 2625

EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes

and/or additions be unacceptable to applicant, an amendment may be filed as provided

by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be

submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview

with Mr. Peter B. Martine on 12/01/2010.

The application has been amended (underlined portions) and deleted word(s)

(strikethrough portions) as follows:

In claim 17:

An image output control method that makes image data subjected to a preset

series of image processing and creates multiple different types of dots having different

densities per unit area according to a result of the preset series of image processing, so

as to output an image, said image output control method comprising: determining a

number of dots to be created in each pixel group, which is set to have a predetermined

number of multiple pixels having a two-dimensional size comprising multiple pixels

arranged in primary and secondary scan directions included in the image, with respect

to each of the multiple different types of dots according to the image data; specifying a

priority order of individual pixels in the pixel group for dot creation; determining positions

of dot-on pixels in the pixel group with respect to each type of

dot, based on the determined number of dots to be created in the pixel group with

respect to the type of dot and the specified priority order; and creating the multiple

different types of dots at the determined positions of the dot-on pixels on an output

medium, wherein said step for determining a number of dots to be created in each pixel

group comprises: (I-a) generating first dot density data representing a density of a first

dot to be created in the pixel group, based on the image data, where the first dot has a

highest density per unit area among the multiple different types of dots; (I-b) generating

second dot density data representing a density of either of the first dot and a second dot

to be created in the pixel group, based on the image data, where the second dot has a

second highest density per unit area among the multiple different types of dots; (I-c)

storing a threshold value group consisting of multiple threshold values, which

respectively correspond to the predetermined number of multiple pixels included in the

pixel group; (I-d) comparing the first dot density data with the threshold values included

in the threshold value group and setting a number of threshold values that are smaller

than the first dot density data to a number of the first dots to be created in the pixel

group; and (I-e) comparing the second dot density data with the threshold values

included in the threshold value group and setting a number of the second dots to be

created in the pixel group, based on a number of threshold values that are smaller than

the second dot density data, said step (I-e) comparing the second dot density data with

only threshold values that are greater than the first dot density data and counting the

number of the threshold values that are smaller than the second dot density data, so as

to set the number of the second dots to be created in the pixel group, and wherein at

least one <u>step</u> ~~operation~~ of the image output control method is executed by a processor.

In claim 20:

A computer program product comprising a <u>non-transitory</u> computer-readable storage medium having an image output control program stored thereon, the image output control program being executed by a computer to make image data subjected to a preset series of image processing and create multiple different types of dots having different densities per unit area according to a result of the preset series of image processing, thus outputting an image, the image output control program comprising: a first program code for determining a number of dots to be created in each pixel group, which is set to have a predetermined number of multiple pixels having a two-dimensional size comprising multiple pixels arranged in primary and secondary scan directions included in the image, with respect to each of the multiple different types of dots according to the image data; a second program code for specifying a priority order of individual pixels in the pixel group for dot creation; a third program code for determining positions of dot-on pixels in the pixel group with respect to each type of dot, based on the determined number of dots to be created in the pixel group with respect to the type of dot and the specified priority order; and a fourth program code for creating the multiple different types of dots at the determined positions of the dot-on pixels on an output medium, wherein said first program code for determining a number of dots to be created in each pixel group comprises: program code for generating first dot density data representing a density of a first dot to be created in the pixel group, based on the image data, where the first dot has a highest density per unit area among the multiple different types of dots; program code for generating second dot density data representing a density of either of the first dot and a second dot to be created in the

pixel group, based on the image data, where the second dot has a second highest density per unit area among the multiple different types of dots; program code for storing a threshold value group consisting of multiple threshold values, which respectively correspond to the predetermined number of multiple pixels included in the pixel group; program code for comparing the first dot density data with the threshold values included in the threshold value group and setting a number of threshold values that are smaller than the first dot density data to a number of the first dots to be created in the pixel group; and program code for comparing the second dot density data with the threshold values included in the threshold value group and setting a number of the second dots to be created in the pixel group, based on a number of threshold values that are smaller than the second dot density data, said program code for comparing the second dot density data with the threshold values included in the threshold value group comparing the second dot density data with only threshold values that are greater than the first dot density data and counting the number of the threshold values that are smaller than the second dot density data, so as to set the number of the second dots to be created in the pixel group.

The following is an examiner's statement of reasons for allowance:

Renumbered as claims 1-13 for pending claims 2-8, 17, 20, 23, 26-28.

Claims 2-8, 17, 20, 23, 26-28 of the current application are allowed for the reason of none of prior art of record teaches nor suggests "a first dot number determination module that compares the first dot density data with the threshold values included in the threshold value group and sets a number of threshold values that are smaller than the

first dot density data to a number of the first dots to be created in the pixel group; and a second dot number determination module that compares the second dot density data with the threshold values included in the threshold value group and sets a number of the second dots to be created in the pixel group, based on the preset number of the first dots and a number of threshold values that are smaller than the second dot density data, second dot number determination module comparing the second dot density data with only threshold values that are greater than the first dot density data and counting the number of the threshold values that are smaller than the second dot density data, so as to set the number of the second dots to be created in the pixel group."

The closest prior art Shimada et al. (US 6,293,643), teaches a similar method for recording image data, either singularly or in   combination with cited references, fail to anticipate or render the above underline limitations obvious (to use in combination with other claimed limitations).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Quang N. Vo whose telephone number is (571)270-1121. The examiner can normally be reached on 7:30AM-5:00PM Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David K. Moore can be reached on (571)272-7437. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Quang N Vo/
Examiner, Art Unit 2625

/David K Moore/
Supervisory Patent Examiner, Art Unit 2625